

Title (en)

Printing apparatus and method for controlling the temperature of the printing head of such printing apparatus

Title (de)

Druckvorrichtung und Verfahren zur Steuerung der Druckkopftemperatur in einer solchen Druckvorrichtung

Title (fr)

Appareil d'impression et procédé de contrôle de la température de la tête d'impression d'un tel appareil d'impression

Publication

**EP 0700790 A2 19960313 (EN)**

Application

**EP 95306294 A 19950908**

Priority

JP 21589794 A 19940909

Abstract (en)

An ink jet printing apparatus for industrial use, which is provided with comparatively many numbers of nozzles arranged for high duty recording, particularly an ink jet textile printing apparatus, and an ink jet printing apparatus suitably used for printing on a large sized medium, are provided together with a method for controlling the temperature of the printing head of such high duty printing apparatus, and various other types of printing apparatuses reliably. Of many numbers of heaters for use of discharge, driving signals are applied to those heaters to cause them to discharge ink for recording, and, to the discharge heaters that do not perform recording, the driving signals that do not allow ink to be discharged are applied, but cause them to generate heat, so as to reduce unevenness in the intensities of heat generation among many discharge heaters of the printing head. At the same time, cooling water is supplied by cooling means to the cooling liquid path arranged for the printing head in order to cool it in common.

<MATH> <MATH>

IPC 1-7

**B41J 29/377**; **B41J 2/05**

IPC 8 full level

**B41J 2/01** (2006.01); **B41J 2/05** (2006.01); **B41J 2/125** (2006.01); **B41J 29/377** (2006.01)

CPC (source: EP US)

**B41J 2/04528** (2013.01 - EP US); **B41J 2/04563** (2013.01 - EP US); **B41J 2/0458** (2013.01 - EP US); **B41J 2/04581** (2013.01 - EP US); **B41J 2/04588** (2013.01 - EP US); **B41J 2/04596** (2013.01 - EP US); **B41J 2/04598** (2013.01 - EP US); **B41J 29/377** (2013.01 - EP US); **B41J 2202/08** (2013.01 - EP US)

Citation (applicant)

- US 4910528 A 19900320 - FIRL GEROLD G [US], et al
- JP H034394 A 19910110 - SHARP KK
- JP S6117670 A 19860125 - TAKENAKA KOMUTEN CO, et al
- JP H01127361 A 19890519 - CANON KK
- JP H0343254 A 19910225 - XEROX CORP
- JP H0447948 A 19920218 - CANON KK [JP]
- US 4929963 A 19900529 - BALAZAR LEONARD [US]
- EP 0573062 A2 19931208 - EASTMAN KODAK CO [US]
- JP S6253492 A 19870309 - CANON KK
- JP H0346589 A 19910227 - MITSUBISHI ELECTRIC CORP
- US 4723129 A 19880202 - ENDO ICHIRO [JP], et al
- US 4740796 A 19880426 - ENDO ICHIRO [JP], et al
- US 4463359 A 19840731 - AYATA NAOKI [JP], et al
- US 4345262 A 19820817 - SHIRATO YOSHIKI, et al
- US 4313124 A 19820126 - HARA TOSHITAMI
- US 4558333 A 19851210 - SUGITANI HIROSHI [JP], et al
- US 4459600 A 19840710 - SATO YASUSHI [JP], et al
- JP S59123670 A 19840717 - CANON KK
- JP S59138461 A 19840808 - CANON KK
- JP S5456847 A 19790508 - CANON KK
- JP S6071260 A 19850423 - ELM CO LTD

Cited by

US6568779B1; US6629740B2; EP0819545A3; US6074035A; EP0736390A3; US6945638B2; US6174055B1; WO03037632A1; WO2015063225A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 0700790 A2 19960313**; **EP 0700790 A3 19960619**; **EP 0700790 B1 20000531**; DE 69517270 D1 20000706; JP 3323664 B2 20020909; JP H0872249 A 19960319; US 5992963 A 19991130

DOCDB simple family (application)

**EP 95306294 A 19950908**; DE 69517270 T 19950908; JP 21589794 A 19940909; US 52536995 A 19950907